

# Managing Solid Waste

Los Alamos National Laboratory  
Laboratory Implementation Requirement LIR 404-00-04.2  
Issue Date: January 05, 1999 ( Revised: January 16, 2003)

Mandatory Document

## 1.0 Introduction and Purpose

**Lessons Learned:** **NOTE:** [Click here](#) for Lessons Learned *that may apply* to the requirements contained in this LIR.

**1.1 Overview** The requirements contained in this LIR complement Laboratory Performance Requirement (LPR) [404-00-00](#), “Environmental Protection.” Institutional requirements relating to waste management at the Laboratory are compiled in a series of documents that are part of the LIRs. Not a stand-alone document, this LIR is one in a series of waste management documents. The primary waste management document that contains the general requirements that shall apply to all waste types is LIR 404-00-02, “General Waste Management Requirements.”

This document only contains requirements that are unique to solid waste as defined below. Solid waste is regulated by the New Mexico Administrative Code (NMAC), Title 20, Chapter 9, Part 1 (20 NMAC 9.1 as amended), otherwise known as the New Mexico Solid Waste Management Regulations.

This document provides requirements that shall be implemented by generators in managing solid waste in accordance with state and Laboratory requirements. The requirements contained in this document shall become effective on the date of issue. This revision deletes Notices 71 and 72.

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## 2.0 Scope and Applicability

The requirements contained in this document shall apply to all personnel at the Laboratory generating solid waste as defined below. It summarizes the requirements that shall be implemented to control, store, treat and dispose of the waste to protect human health and the environment, to control pollution, and to implement the state, federal and Laboratory requirements. Laboratory personnel involved in solid waste generation activities, including environmental restoration activities that generate solid waste, must implement the requirements contained in this document.

**GUIDANCE** General requirements for characterization and

**NOTE:** documentation of wastes are given in [LIR 404-00-02](#),  
“General Waste Management Requirements.”

The requirements contained in this LIR shall not apply to hazardous, radioactive, or polychlorinated biphenyl (PCB) waste. The following LIRs provide waste management requirements that shall apply to these waste types:

- [LIR 404-00-03](#), “Hazardous and Mixed Waste Requirements”
- [LIR 404-00-05](#), “Managing Radioactive Waste”
- [LIR 404-00-06](#), “Managing Polychlorinated Biphenyls”

Additional requirements for the management of Biological Waste are found in [LIR 402-530-00](#), “Biological Safety.”

## 3.0 Acronyms

ACM	asbestos containing material
B/BF	blood and/or bodily fluid
C&D	construction and demolition
CFR	Code of Federal Regulations
CWDR	Chemical Waste Disposal Request
LAC	Los Alamos County
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMHTA	New Mexico Hazardous Waste Act
NMSWA	New Mexico Solid Waste Act
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyls
PCS	petroleum contaminated soil
PLM	polarized light microscopy
RACM	regulated asbestos containing material

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RCRA	Resource Conservation and Recovery Act
SWSC	Sanitary Wastewater Systems Consolidation plant
TFCH	treated formerly characteristic hazardous
TSCA	Toxic Substances Control Act
WAC	Waste Acceptance Criteria
WMC	Waste Management Coordinator
WMPPC	Waste Management Policy and Procedures Committee
WPF	Waste Profile Form

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## 4.0 Definitions

**GUIDANCE** The definitions used in this document are strictly solid waste  
**NOTE:** regulatory definitions from the New Mexico Administrative Code. General waste management definitions may be found in the "[Waste Management Glossary](#)," located on the Laboratory Home Page under "Official Documents."

**asbestos waste** - Regulated asbestos containing material (RACM) which contains more than 1% asbestos as determined using the method specified in the Code of Federal Regulations (CFR), Title 40, Appendix A, Subpart F, Part 763, Section 1, Polarized Light Microscopy (PLM) and includes:

1. Friable asbestos material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure;
2. Category I nonfriable asbestos containing material (ACM) that has become friable, including asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos;
3. Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading;
4. Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations, which excludes Category I nonfriable ACM.

**GUIDANCE** The Laboratory manages all nonfriable asbestos as New

**NOTE:** Mexico Special Waste.

**ash** - Ash that results from the incineration or transformation of solid waste and includes both fly ash and bottom ash, and ash from the incineration of densified-refuse-derived fuel and refuse-derived fuel, but does not include fly ash waste, bottom ash waste, slag waste and flue gas emission control waste generated primarily from

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the combustion of coal or other fossil fuels and wastes produced in conjunction with the combustion of fossil fuels that are necessarily associated with the production of energy and that traditionally have been and actually are mixed with and are disposed of or treated at the same time with fly ash, bottom ash, boiler slag or flue gas emission control wastes from coal combustion.

***classified waste*** - Classified matter determined by a generating group to be a waste that may include, but is not limited to, documents, film, parts or assemblies, safe or vault locking devices, computer tape, degaussed magnetic tape, metal parts, or classified shapes.

***clean fill*** - Broken concrete, brick, rock, stone, glass, reclaimed asphalt pavement, or uncontaminated soil generated from construction and demolition activities. Reinforcement materials, which are an integral part of the fill, such as rebar, are included. Clean fill must not contain other solid waste or hazardous waste.

**GUIDANCE** Some construction and demolition debris may be considered

**NOTE:** clean fill, provided waste documentation exists, such as documented process knowledge, acceptable knowledge, or an approved Waste Profile Form (WPF).

***commercial hauler*** - A person transporting solid waste for hire by whatever means for the purpose of transfer, processing, storing, or disposing of the solid waste in a solid waste facility, except that the term does not include an individual transporting solid waste generated on or from his residential premises for the purpose of disposing of it in a solid waste facility.

***commercial solid waste*** - Includes all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential, household, and industrial wastes. These wastes may be disposed at commercial or municipal solid waste facilities.

***construction and demolition debris*** - Materials generally considered to be not water soluble and nonhazardous in nature including, but not limited to, steel, glass, brick, concrete, asphalt roofing materials, pipe, gypsum wallboard, lumber and other materials discarded during the construction or destruction of a structure or project. It also includes rocks, soil, tree remains, trees, and other vegetative matter that normally results from land clearing.

***discharge*** - Disposal, spilling, leaking, pumping, pouring, emitting, emptying, or dumping into water or in a location and manner where there is a reasonable probability that the discharged substance will reach surface or subsurface water.

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***industrial solid waste*** - Solid waste generated by manufacturing or industrial processes that is not hazardous waste regulated under Subtitle C of the Resource Conservation and Recovery Act (RCRA). This term does not include mining waste or oil and gas waste.

***infectious waste*** - A limited class of substances that carry a ***probable risk of transmitting disease to humans***, including but not limited to:

1. Microbiological laboratory wastes including cultures and stocks of infectious agents from clinical research and industrial laboratories and disposable culture dishes and devices used to transfer, inoculate, and mix cultures.
2. Pathological wastes including human or animal tissues, organs, and body parts removed during surgery, autopsy, or biopsy.
3. Disposable equipment, instruments, utensils, and other disposable materials that require special precautions because of contamination by highly contagious diseases.
4. Human blood and blood products including waste blood, blood serum, and plasma.
5. Used sharps including used hypodermic needles, syringes, scalpel blades, Pasteur pipettes, and broken glass.
6. Contaminated animal carcasses, body parts, and bedding, especially those intentionally exposed to pathogens in research, in the production of biologicals or the “in vivo” testing of pharmaceuticals.

For other biological operations involving contact with pathogenic organisms, contact with blood or body fluids, or handling of animals or wildlife, refer to [LIR 402-530-00](#), “Biological Safety.”

***liquid waste*** - A waste material that is determined to contain free liquids, defined by the Paint Filter Test, described in “Test Methods for Evaluating Solid Waste” (SW-846, test method 9095A).

***municipal solid waste landfill*** – A solid waste facility that receives household waste and may also receive commercial solid waste, industrial solid waste, and construction and demolition debris, depending upon its permit.

***nonputrescent*** - Not allowed to rot or decay due to the breakdown of organic matter.

***pharmaceutical-controlled substance*** - A drug or substance regulated by the New Mexico Controlled Substance Act that has a high potential to be abused by the human population and can lead to substance dependency.

***sanitary waste*** – “Municipal solid waste” generated at a private household that may be disposed at a municipal solid waste landfill. No waste generated at the Laboratory

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is “municipal solid waste” – items normally classified as sanitary waste at home are commercial solid waste (see definition above) if generated at the Laboratory.

**sludge** - Waste in a solid, semi-solid, or liquid physical form generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control device. Sludge does not include treated effluent from these plants/devices.

**solid waste** - Garbage, refuse, sludge (as defined above) and other discarded material including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations and from community activities.

Solid waste **does not** include:

1. Drilling fluids, produced waters, and other nondomestic wastes associated with the exploration, development or production, transportation, storage, treatment or refinement of crude oil, natural gas, carbon dioxide gas or geothermal energy
2. Fly ash waste, bottom ash waste, slag waste and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels and wastes produced in conjunction with the combustion of fossil fuels that are necessarily associated with the production of energy and that traditionally have been and actually are mixed with and are disposed of or treated at the same time with fly ash, bottom ash, boiler slag or flue gas emission control wastes from coal combustion
3. Waste from the extraction, beneficiation and processing of ores and minerals including phosphate rock and overburden from the mining of uranium ore, coal, copper, molybdenum, and other ores and minerals
4. Agricultural waste including, but not limited to, manure and crop residues returned to the soil as fertilizer or soil conditioner
5. Cement kiln dust waste
6. Sand and gravel
7. Solid or dissolved material in domestic sewage; or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under Section 402 of the Federal Water Pollution Control Act, 33 U.S.C. Section 1342; or source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, 42 U.S.C. Section 2011 et seq.
8. Densified-refuse-derived fuel
9. Material except petroleum contaminated soils, regulated by Subtitle C or Subtitle I, 42 U.S.C. Section 6901 et seq. of the federal RCRA of 1976; substances regulated by the federal Toxic Substances Control Act (TSCA), 7 U.S.C. Section 136 et seq.; or low-level radioactive waste

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***solid waste dumpster*** – Large containers, which are designed to hold large volumes of consolidated trash. These containers are located outside buildings at the Laboratory.

***Special Waste (i.e., New Mexico Special Waste)*** - The following are types of solid wastes that have unique handling, transportation, or disposal requirements to assure protection of the environment and the public health, welfare, and safety:

1. Treated formerly characteristic hazardous wastes (TFCH)
2. Asbestos waste (see definition above)
3. Ash (see definition above)
4. Infectious waste (see definition above)
5. Sludge, except compost that meets the provisions of 40 CFR 503 (see definition above)
6. Industrial solid waste (see definition above)
7. Spill of a chemical substance or commercial product
8. Dry chemicals, which, when wetted, become characteristically hazardous
9. Petroleum contaminated soils

***Special Waste landfill*** - A landfill that receives solid waste other than household waste. This includes, but is not limited to, commercial solid wastes or New Mexico Special Wastes as defined in 20 NMAC 9.1. A construction and demolition landfill is not a Special Waste landfill.

***storage*** - The accumulation of solid waste for the purpose of processing or disposal.

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## 5.0 Precautions and Limitations

Failure to implement the requirements contained in this LIR could cause the Laboratory or the organization to incur penalties and fines.

- RRES-SWRC shall be contacted for special situations not covered in this document.
- The requirements contained in [LIR 301-00-02](#), “Exceptions or Variances to Laboratory Operations Requirements” shall be implemented for exceptions and variances to these requirements.



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## 6.0 General Implementation Requirements

**6.1 Division Leader, Program Directors, and Office Directors** Division leaders, program directors, and office directors shall be responsible for ensuring that federal, state and Laboratory requirements specified in this document are implemented. [LIR 404-00-02](#) shall be referred to for implementation requirements for all waste types.

**6.2 Solid Waste Generators** Individual solid waste generators shall

- Implement the general waste management requirements contained in [LIR 404-00-02](#).
- Dispose of office trash and other commercial solid waste (as defined above) in an office trash can or solid waste dumpster, which may be done without any waste documentation.
- Manage generated solid waste in accordance with the requirements contained in this LIR.

**6.3 Waste Management Coordinators** Waste management coordinators (WMCs) shall assist waste generators to ensure solid waste is managed in accordance with the requirements contained in this document

**6.4 RRES-SWRC** The Solid Waste Regulatory Compliance Group (RRES-SWRC) shall act as the point-of-contact for Laboratory personnel regarding solid waste regulatory issues.

**6.5 FWO-SWO** The Facility and Waste Operations, Solid Waste Operations Group (FWO-SWO) shall

- prepare manifests for New Mexico Special Waste.
- contract off-site disposal facilities for NM Special Waste and other types of industrial solid waste.

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**6.6  
RRES-  
WQH**      The approval of the Water Quality and Hydrology Group (RRES-WQH), in conjunction with the SWSC WAC Committee, shall be required for ***all*** discharges of solid waste into the Sanitary Wastewater Systems Consolidation (SWSC) plant.

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**6.7  
Commercial  
Haulers**      Only commercial haulers registered with the New Mexico Environment Department (NMED), Solid Waste Bureau shall transport solid waste intra-site and off-site for disposal.

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**6.8  
Prohibited  
Acts**      Laboratory personnel shall **not**

- dispose of solid waste in a manner that will harm the environment or endanger the public health, welfare, or safety.
- dispose of solid wastes in a place other than an office trash can, a solid waste dumpster, or a solid waste facility.
- dispose of sludge (that does not meet the analytical criteria of [20 NMAC 9.1, Section 704](#)), domestic sewage, treated domestic sewage, or septage at a solid waste facility.
- dispose of the following materials in a solid waste dumpster or at a solid waste facility:
  - hazardous waste
  - radioactive waste
  - liquid waste
  - lead-acid batteries
  - infectious waste, asbestos waste, and other types of NM Special Waste
  - administratively controlled waste
  - classified waste
  - pharmaceuticals and controlled substances
  - materials regulated under the federal Toxic Substances Control Act (TSCA), including PCBs as defined in that Act (contact RRES-SWRC for assistance with TSCA issues)
  - aerosol cans and pressurized containers

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## 7.0 Commercial Solid Waste Requirements

Commercial solid waste shall include office trash, broken glass, food debris, metals, maintenance and janitorial supplies, and other nonhazardous items.

Recycling options shall be considered prior to disposing of any material as a commercial solid waste.

**GUIDANCE** The following are examples of commercial solid

**NOTE:** wastes that can be recycled:

- office paper products
  - white paper
  - colored paper
  - envelopes
  - catalogs
  - binders
  - folders
  - brochures
  - flyers
  - magazines
  - books]
  - phone books
  - newsprint
  - junk mail
- scrap wood and pallets
- cardboard
- transparencies
- batteries
- light bulbs
- toner cartridges
- circuit boards
- computer manuals
- non-hazardous scrap metal
- aluminum cans
- various plastic materials
- non-hazardous oils and lubricants.

**GUIDANCE** Descriptions of the recycle requirements and the material forms

**NOTE:** that are acceptable for recycling may be found by clicking on the [recycling logo](#) on the LANL home page.

The above referenced website shall be consulted to determine the disposition of the materials.

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## 8.0 Construction and Demolition (C&D) Debris Waste Requirements

- C&D debris ***shall not*** include asbestos; roofing materials (other than asphalt roofing materials); liquids such as waste paints, solvents, sealers; adhesives; or potentially hazardous materials.
- C&D debris waste generators hauling waste in government-plated vehicles or associated with LANL D&D activities shall:
  - Segregate dirt, asphalt, concrete, metal, brush, and other recyclable materials from construction debris stream.
  - Recycle, reuse, or resell recyclable materials either at the construction site or within the Laboratory recycling program.
  - ***Not*** mix C&D debris with other types of solid waste.
  - Have C&D debris destined for the Los Alamos County landfill inspected at the Material Recycling Facility (MRF), TA 60, Bldg. 85 to assure compliance with these requirements unless exempted by contract.

**GUIDANCE** Additional information on the MRF waste inspection

**NOTE:** program may be found by clicking on the [recycling logo](#) on left side near the bottom of the LANL home page.

- Arrange pick-up of non-recyclable debris with a solid waste commercial hauler for disposal at the LAC landfill or other C&D landfill.
- Major demolition/construction subcontractors shall include C&D debris recycling specifications in the construction/demolition contract to the maximum extent possible.
- C&D debris mixed with other types of waste shall lose its classification as C&D debris.

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## 9.0 New Mexico Special Waste Requirements

### 9.1

#### NM Special Waste Generators

Generators of New Mexico (NM) Special Waste shall:

- Document NM Special Waste characterization through acceptable knowledge or analytical results.
- Clearly mark containers holding NM Special Waste with the contents, the starting accumulation date, and the words “New Mexico Special Waste

**Example:** Petroleum Contaminated Soil  
New Mexico Special Waste  
11/17/97

**GUIDANCE** Asbestos and infectious wastes have specific

**NOTE:** marking/labeling requirements, which are described in the LANL WAC.

- Store NM Special Waste in a storage area that is registered with RRES-SWRC and identified by a prominently posted sign.

**GUIDANCE** RRES-SWRC or a WMC should be contacted for NM

**NOTE:** Special Waste storage area signs.

- Store NM Special Waste (other than asbestos) for a maximum of 90 days. RRES-SWRC shall be contacted if there is a possibility of exceeding this deadline.
- *Not* dispose of NM Special Waste in the solid waste dumpsters located throughout the Laboratory.

### 9.2

#### RRES-SWRC

RRES-SWRC shall register NM Special Waste storage areas and shall serve as the point-of-contact for NM Special Waste issues.

### 9.3

#### FWO-SWO

FWO-SWO shall dispose of the NM Special Waste that it manages at a NM Special Waste landfill (or the equivalent for out-of-state disposal).

### 9.4

#### Treated Formerly Characteristic Hazardous Waste

**GUIDANCE** An example of treated formerly characteristic hazardous

**NOTE:** (TFCH) waste is waste from generator treatment and treatability studies.

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- TFCH waste generators shall:
  - Contact RRES-SWRC for generator treatment requirements prior to conducting generator treatment or a generator treatability study.
  - Identify underlying hazardous constituents of TFCH waste.

**GUIDANCE** Refer to the [Land Disposal Restriction form](#) on the [WMC](#)

**NOTE:** [forms web page](#) for more details. The WMC web page can be accessed through the FWO-SWO web page.

## 9.5 Asbestos Waste

The Laboratory shall manage friable and nonfriable asbestos as New Mexico Special Waste.

### 9.5.1 Asbestos Waste Generators

Asbestos waste generators shall:

- Contact RRES-MAQ and the WMC prior to conducting asbestos abatement work.
- Coordinate with RRES-MAQ to track asbestos waste from generation to disposal
- Submit a WPF and CWDR to FWO-SWO, even if the waste will be shipped directly off-site instead of through the FMU-64 asbestos transfer station.
- Analyze potential asbestos containing material (ACM), to determine the asbestos content, at a laboratory that is a successful participant in the National Voluntary Laboratory Accreditation Program of the National Institute of Standards and Technology asbestos laboratory program.
- Package, label, and store asbestos waste in accordance with the LANL Waste Acceptance Criteria (LANL WAC) [PLAN-WASTEMGMT-002](#).
- Coordinate with FWO-SWO or NM Special Waste shipper to ensure that asbestos waste is disposed of off-site within 90 days of generation.

### 9.5.2 Asbestos Waste Transporters

Asbestos waste transporters shall:

- Transport containerized asbestos waste in Laboratory vehicles with an enclosed carrying compartment.
- Keep surfaces of vehicles and other asbestos handling equipment and facilities free from the accumulation of dusts and waste containing asbestos.

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- Inspect vacuum trucks containing asbestos liquid waste to ensure that liquid is not leaking from the truck. Vehicles equipped with a compactor ***shall not*** be used to transport asbestos waste.

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## 9.5.3 RRES-MAQ

The Meteorology and Air Quality Group (RRES-MAQ) shall

- Track asbestos waste from removal to final disposal.
- Serve as the point-of-contact for State and Federal regulations governing visible airborne asbestos, asbestos emissions, and asbestos reporting requirements.

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## 9.5.4 FWO-SWO

FWO-SWO shall ship off-site within 90 days of generation the asbestos waste it manages at the Material Recycling Facility (MRF) at TA-60.

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## 9.6 Sludge

### **GUIDANCE** **NOTE:**

Sludge is mainly generated at the SWSC plant, but also could come from septic tanks and other sources. Grit and screenings from the SWSC plant and sediment from cooling towers are not considered sludge and are regulated as solid waste if they pass the paint filter test (i.e., contain no free liquids) and are not hazardous or TSCA-regulated waste.

Sediments from cooling towers shall not be dewatered by discharging liquid into the soil.

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## 9.7 Spill of a Chemical Substance or Commercial Product

This waste category shall include only those spilled chemical substances or commercial products that have the potential to be environmentally threatening, and therefore require special handling, transportation, or disposal. Spills of benign chemical substances or commercial products shall **not** fall into this regulated waste category. RRES-SWRC shall be contacted for assistance in determining what is environmentally threatening.

Laboratory employees **shall not** discharge spilled chemical substances or commercial products that require special administrative controls due to human health or environmental concerns:

- To the Laboratory's sanitary sewer system,
- To the LAC landfill by placing them in a solid waste dumpster, or
- To an on-site surface impoundment.

## 9.8 Dry Chemicals that Become Character- istically Hazardous When Wet

Generators of this NM Special Waste shall:

- Manage dry chemicals that have become wet and, therefore, characteristically hazardous as a RCRA hazardous waste (refer to LIR 404-00-03).
- **Not** dispose of dry chemicals that become characteristically hazardous when wet in a solid waste dumpster that will be disposed of at the LAC Landfill.

## 9.9 Petroleum Contamin- ated Soils

Generators of petroleum contaminated soil (PCS) shall

- Manage newly generated PCS that is excavated and removed from the site for subsequent storage, treatment, and/or disposal as NM Special Waste.
- Ensure immediate clean up of current spills and releases of petroleum substances to the soil .
- Determine if PCS meets the analytical requirements of [20 NMAC 9.1.704](#).  
NOTE: These requirements are available on the RRES-SWRC web page under "Solid Waste."
- Retain copies of analytical data on specific spills or releases of petroleum substances to the soil.
- Coordinate documentation of proposed PCS remediation with RRES-SWRC, if PCS will be landfarmed.



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- **Not** dispose of any remediated PCS as solid waste if it contains greater than the following constituent concentrations:
  - Sum of benzene, toluene, ethylbenzene, and xylene isomers at 500 mg/kg
  - Benzene at 10 mg/kg
  - Total petroleum hydrocarbon concentration at 1000 mg/kg

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## 9.10 Infectious Waste

**GUIDANCE** Rodent carcasses, nesting materials and droppings found during pest control operations are not considered infectious waste by the NMED. However, rodent carcasses trapped for counting operations or laboratory rodents used in experiments at the Laboratory are considered infectious waste and should be managed as such.

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### 9.10.1 Infectious Waste Generators

Regulatory requirements that shall be implemented for packaging, labeling, and marking infectious waste are contained in the [LANL WAC](#), Chapter 13

Every person who generates, transports, stores, treats, or disposes of infectious and regulated medical waste *as a part of normal operations* shall prepare a management plan for the waste identifying:

- The type of waste generated or handled
- The segregation, packaging, labeling, collection, storage, and transportation procedures to be implemented
- The treatment or disposal methods to be used
- The transporter and disposal facility to be used
- The person responsible for managing the infectious waste

Generators that store infectious and regulated medical waste shall:

- Segregate containers of infectious and regulated medical waste from other types of waste containers (such as hazardous waste, radioactive waste, or other solid waste) using separate secondary containment.
- Provide containment for infectious and regulated medical waste in a manner and location that:
  - Affords protection from animal intrusion
  - Does not provide a breeding place or a food source for insects and rodents
  - Minimizes exposure to the public
- Store and contain infectious waste in areas that:

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- Protect infectious and regulated medical waste from the weather (i.e., the sun, precipitation, wind, etc.)
  - Are ventilated to the outdoors
  - Are only accessible to authorized personnel
- Keep infectious and regulated medical waste in a nonputrescent state by refrigeration or freezing, if necessary to avoid decay.
- Label refrigerators and freezers used for storage of infectious wastes with the word “BIOHAZARD” and the universal biohazard symbol.
- Mark storage areas with prominent warning signs on or adjacent to the exterior doors or gates.
- Provide warning signs, with the word “BIOHAZARD” and the universal biohazard symbol, that are easily read from a distance of 25 feet.
- Provide signs with a background that is orange or orange-red. In addition, signs shall state:
  - The name of infectious agents, if known, stored in the area
  - The type of biohazard presumed to be present in waste stored in the area,
  - Special requirements for entering the storage area
  - The name and telephone number of the person responsible for the waste stored in the area
- Contact RRES-SWRC if rigid outside containers that have held infectious waste are going to be reused.

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## 9.10.2 Generators Who Disinfect Waste

**GUIDANCE** Chemical disinfection is not allowed by the  
**NOTE:** requirements contained in 20 NMAC 9.1 for treatment of infectious waste without prior approval by the NMED Secretary. Contact RRES-SWRC to submit chemical disinfection methods for approval.

- Chemical disinfection shall be an acceptable practice for disinfection of other contaminated, noninfectious waste. (See [LIR 402-530-00](#), “Biological Safety” or contact HSR-5 for these requirements.)
- Organizations that disinfect infectious waste shall have an infectious waste management plan containing
  - Waste collection and storage procedures,
  - Transportation procedures to be implemented,
  - Treatment or disposal methods to be used,
  - Transporter and disposal facility to be used, and

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- The person responsible for management of the infectious and regulated medical waste.
- Personnel responsible for disinfecting infectious and regulated medical waste shall be trained with respect to the contents of the infectious waste management plan.
- Generators shall follow a written schedule of cleaning and decontamination of equipment in accordance with the Laboratory's Bloodborne Pathogen Program described in [LIR 402-530-00](#), "Biological Safety."
- Generators shall implement the following requirements for on-site steam sterilization:
  - The unit shall only sterilize waste generated at the Laboratory.
  - The unit shall have a design capacity of 200 pounds per hour or less.
  - Documentation shall be kept on file certifying that the operator of the steam sterilizer understands the written operating procedure for each individual unit used (e.g., time, temperature, pressure, type of waste, type of container, closure of the container, pattern of loading, water content, and maximum load quantity).
  - The unit shall be operated and the records and logs shall be maintained as required by the [20 NMAC 9.1.706](#) and [LIR 402-530-00](#), "Biological Safety."
  - Units with a design capacity of 10 pounds per hour or greater shall be certified and registered with NMED. The user of steam sterilizers that exceed this design capacity shall fill out the Registration Form for Steam Sterilizers. Contact RRES-SWRC for assistance with steam sterilization requirements and submission of the registration form to NMED.
- The operator of the treatment process who has sterilized infectious and regulated medical waste in an autoclave or disinfected it in a manner approved by the NMED shall
  - Certify in writing that the solid waste remaining after treatment has been rendered noninfectious.
  - Arrange disposal with the LAC landfill before transporting the disinfected waste to the landfill.
  - **Not** compact, grind, or use similar devices to reduce the volume of infectious and regulated medical waste until it is rendered noninfectious.

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## 9.10.3 Occupational Medicine (HSR-2)

HSR-2 shall:

- Manage and store infectious and regulated medical waste, bloods and body fluids (B/BF), and clean-up materials in quantities of less than or equal to 5 kilograms.

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- Accept small quantities of infectious waste from any Laboratory generator who double-bags the waste and transports it to HSR-2 within three hours of generation.

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## 9.10.4 Industrial Hygiene and Safety (HSR-5)

HSR-5 shall:

- Assist with the Bloodborne Pathogens Exposure Control Plan and associated Occupational Safety and Health Administration (OSHA) regulations.
- In conjunction with RRES-SWRC, assist with chemical disinfection requirements for infectious waste.
- In conjunction with RRES-SWRC, assist with steam sterilizer requirements.
- In conjunction with RRES-SWRC, assist with information on managing spills and releases of B/BF.

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## 9.10.5 Emergency Management and Response (S-8)

S-8 shall:

- Serve as the point-of-contact in the event of a spill or release of infectious waste, and B/BF.
- Contact the Support Services Contractor to respond and clean up spills and releases of infectious waste and B/BF.

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## 9.10.6 Solid Waste Regulatory Compliance (RRES-SWRC)

RRES-SWRC shall assist with the registration of steam sterilizers in conjunction with the Industrial Hygiene and Safety Group.

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## 9.10.7 Solid Waste Operations (FWO-SWO)

FWO-SWO shall not store infectious and regulated medical waste at TA-54, because the Laboratory has a contract that provides turnkey services for this type of waste.

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## 10.0 Administratively Controlled Waste Requirements

**GUIDANCE** Examples of administratively controlled wastes include chemical reagents or reactants that are not hazardous waste, solvents that are not hazardous waste, empty gas cylinders or containers not fit for recycling, and any wastes that require Department of Transportation special handling.

**NOTE:**

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## 10.1

### Administratively Controlled Waste Generators

Administratively controlled waste generators shall

- Refer to [LIR 404-00-02](#), General Waste Management Requirements, for disposal.
- *Not* place these wastes in a solid waste dumpster.

## 10.2

### FWO-SWO

FWO-SWO shall dispose of administratively controlled waste that it manages at approved facilities and ***shall not*** dispose of it at the LAC landfill or at other nonspecial waste landfills.

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## 11.0 Classified Solid Waste Requirements

### 11.1

#### Classified Waste Generators

Laboratory personnel shall sanitize classified waste in accordance with waste-specific Laboratory requirements approved by the Department of Energy.

### 11.2

#### FWO-SWO

FWO-SWO ***shall not*** dispose of classified solid waste that it manages at an off-site solid waste landfill before the waste is sanitized.

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## 12.0 Pharmaceutical and Controlled Substance Waste Requirements

Generators of unused and expired pharmaceuticals shall implement the New Mexico Board of Pharmacy requirements for disposal, as authorized by the New Mexico Pharmacy Act, New Mexico Statutes Annotated 61-11-1 to -28. Generators of unused and expired controlled substances shall implement the disposal requirements of the New Mexico Controlled Substances Act, New Mexico Statutes Annotated 30-31-1 to -42.

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## 13.0. Documentation

**GUIDANCE** Many solid waste records are described in [LIR 404-00-02](#). This section  
**NOTE:** describes records that are unique to commercial solid waste or New Mexico  
Special Waste.

**13.1  
Solid Waste  
Generators** Commercial solid waste disposed of in a solid waste dumpster shall require no  
documentation.

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**13.2  
C&D Debris  
Waste  
Generators** Generators of concrete and asphalt debris that is recycled shall complete  
acceptable knowledge documentation.

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**13.3  
NM Special  
Waste  
Generators** NM Special Waste generators shall complete a WPF for NM Special Waste.  
A CWDR shall be completed to document the NM Special Waste disposal.

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**13.4  
Infectious  
Waste  
Generators** Infectious waste generators with an infectious waste management plan shall  
maintain that plan indefinitely. Infectious waste generators that disinfect waste  
shall maintain the sterilization records and waste certifications indefinitely.

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**13.5  
Pharma-  
ceutical and  
Controlled  
Substance  
Waste  
Generators** Generators of pharmaceutical and controlled-substance wastes shall maintain  
the records required by the New Mexico Board of Pharmacy and the  
Controlled Substance Act.

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## 14.0. References

**14.1 Document Ownership** The Office of Institutional Coordination for this document shall be the [WMPPC](mailto:wmppc@lanl.gov). ([wmppc@lanl.gov](mailto:wmppc@lanl.gov)).

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**14.2 Referrals**

- Meteorology and Air Quality Group (RRES-MAQ), 5-8855
- Biosafety Committee, 7-8229
- Dynamic Experimentation (DX) Division, 7-5653
- Emergency Management and Response (EM&R), S-8, 7-6211
- Engineering Sciences and Applications (ESA) Division, 7-4136
- Environmental Restoration Group (RRES-ER), 7-4109
- ES&H Training Group (HSR-13), 5-5605
- Fire Protection Group (FWO-FIRE), 7-9045
- Gas Processing Facility (BUS-4), 7-4406
- Hazardous Materials Transfer Approvals (BUS-4), 7-4127
- Integrated Risk Analysis, Management, and Communication Group (HSR-3), 7-8348
- Health Physics Operations Group (HSR-1), 7-7171
- Industrial Hygiene and Safety Group (HSR-5), 7-5231
- Johnson Controls Northern New Mexico, Redistribution and Marketing, 7-2109
- Material Management Group (BUS-4), 7-4127
- Office of Legal Counsel, General Law, 7-3766
- Operational Safety Section of the Industrial Hygiene and Safety Group (HSR-5), 7-4644
- Pollution Prevent Group (RRES-PP), 7-4348
- Recycling Program (RRES-PP), 7-4348
- Solid Waste Operations (FWO-SWO), 5-6158
- Solid Waste Regulatory Compliance (RRES-SWRC), 7-0666
- SPCC Plan (RRES-WQH), 5-4752
- Water Quality and Hydrology Group (RRES-WQH), 5-0453

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## 14.3 Documents

New Mexico Hazardous Waste Act, New Mexico Statutes Annotated 74-4-1 to 74-4-13.

New Mexico Solid Waste Act, New Mexico Statutes Annotated 74-9-1 to 74-9-42.

New Mexico Administrative Code (20 NMAC 2.78) as amended

New Mexico Administrative Code (20 NMAC 4.1) as amended

New Mexico Administrative Code (20 NMAC 9.1) as amended

42 U.S.C. Sec. 6901 et.seq., Resource Conservation and Recovery Act, as amended

EPA SW-846, "Test Methods for Evaluating Solid Waste, Chemical/Physical Methods."

29 CFR Section 1910.1030, "Bloodborne Pathogens."

40 CFR 61 Subpart M, "National Emission Standards for Asbestos"

40 CFR 261, "Identification and Listing of Hazardous Waste"

40 CFR 261.24, "Toxicity Characteristic"

40 CFR 268, "Land Disposal Restrictions"

40 CFR 503, "Standards for the Use or Disposal of Sewage Sludge"

40 CFR Section 761, "Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce and Use Prohibitions"

40 CFR Section 763, "Asbestos"

42 CFR Section 72, "Interstate Shipment of Etiological Agents"

49 CFR Section 171-178, Department of Transportation Regulations for the Transportation of Infectious Substances and Regulated Medical Waste

20 NMAC 9.1, Section 105.BZ, "Special Wastes"

20 NMAC 9.1, Section 107, "Prohibited Acts"

20 NMAC 9.1, Subpart VII, "Special Waste Requirements"

"Biological Safety," Los Alamos National Laboratory [LIR 402-530-00](#)

"General Waste Management Requirements," Los Alamos National Laboratory Implementation Requirement, [LIR 404-00-02](#).

"Hazardous and Mixed Waste Requirements," Los Alamos National Laboratory Implementation Requirement, [LIR 404-00-03](#).

"Los Alamos National Laboratory, Incident Reporting Process," Los Alamos



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National Laboratory Implementation Requirement [LIR 201-00.04](#).

“Los Alamos National Laboratory Waste Acceptance Criteria,” Los Alamos National Laboratory, [PLAN-WASTEMGMT-002](#).

“Managing Polychlorinated Biphenyls,” Los Alamos National Laboratory Implementation Requirement, [LIR 404-00-06](#).

“Managing Radioactive Waste,” Los Alamos National Laboratory Implementation Requirement, [LIR 404-00-05](#).

“Waste Profile Form Guidance,” Los Alamos National Laboratory Implementation Guidance, [LIG 404-00.03](#).

“Chemical Waste Disposal Request Guidance,” Los Alamos National Laboratory Implementation Guidance, [LIG 404-00-04](#)

“RCRA Land Disposal Restrictions: A Guide to Compliance,” *ISBN 0-444-10022-9*, Elsevier Science Inc., New York, New York.